

voluntary movements began to increase in intensity from the first day. They developed progressively, until at the end of the tenth, fifteenth, and twenty-fifth days they were able to stand, and walking began to be possible. Other phenomena began gradually to assume the normal condition. The operation is performed as follows: An incision two to three inches in length is made in a transverse direction, exposing the portion of the spinal column corresponding to the angle of curvature. The transverse process of one of the vertebra is then removed subperiosteally from its attachment to the rib and torn away as deeply as possible at its vertebral attachment. The grooved director is then pushed beneath the periosteum and the lateral aspect of the vertebra explored and the abscess discovered. Pus usually shows itself as soon as the lateral process is removed, the grooved director only serving to enlarge the opening. The permanence of the results obtained is attested by the absence of the paraplegia fourteen, eleven, and ten months after the operation in the first three cases, and the persistent improvement in all cases operated upon.

COMPENSATORY HYPERTROPHY OF THE FIBULA FOLLOWING OSTEO-MYELITIS OF THE TIBIA.

A remarkable case of compensatory hypertrophy of a bone is reported by MARCHANT (*Rev. d'Orthopédie*, March, 1895). The patient was operated upon for an osteomyelitis of an aggravated character; at that time the patient was thirteen years of age. There were multiple foci found in the thumb, clavicle, and especially in the right tibia and its articulation at the knee. The resection extended from the tuberosity of the tibia to two and one-half inches above the tibio-tarsal articulation. The periosteum was almost entirely destroyed in the upper part of this wound, and an arthrotomy of the knee was necessary. The patient was seen again six years after this operation. The leg had a curvature which had its convexity internally. The region of the knee was greatly enlarged. The middle portion of the tibia was almost entirely wanting, while the internal malleolus maintained its normal appearance. The knee was deformed by the presence on the inner side and posteriorly of the head of the fibula; the styloid apophysis of the fibula was on a line with the upper border of the patella, having been pressed there by the weight of the body and lack of development in the tibia. The foot maintained its normal relations, the hypertrophy existing in the fibula in its upper and middle thirds, where it was greatly thickened in the antero-posterior direction and on the anterior surface. There was considerable shortening, but movement remained very good to a right-angle, and walking was easy without mechanical assistance.

ANTITOXIN EXANTHEMA.

ASCH details a case (*Berliner klinische Wochenschrift*, 1894, No. 51) of mild diphtheria in which, on the first day of the disease, 10 c.cm. of Behring's No. 1 serum were injected. On the following day 5 c.cm. of No. 2 were injected. Two days later an urticarial eruption appeared at the points of injection on the flexor surface of the thighs. In five days the patient was out of bed, but a week later was obliged to return with fever, accelerated, small

pulse, frequent and painful respiration, and somnolence. An eruption appeared on the legs, having all the characters of erythema multiforme. On the arms and face, breast and abdomen, there was a scarlatiniform rash. The patient gradually recovered.

The author thinks there is no doubt that this was a supplementary disease caused by the serum.

CARCINOMA LINGUÆ.

In treating of this most interesting subject, ANDERSON (*The Quarterly Medical Journal*, January, 1895) calls attention to the fact that precancerous conditions, which at the outset may appear benign, have grafted upon them a cancerous condition; therefore, no surgical lesion of the tongue, unless it be of a merely transitory nature, must be regarded as unimportant. In every sore of doubtful character, a portion of the diseased tissue should be excised and examined under the microscope. The piece should not be a mere fragment snipped off with the scissors; such an investigation could only mislead. Cocaine should be injected and a substantial piece of tissue, including the substance of the sore and a little margin, should be removed. The sections for examination should be cut at right-angles to the surface of the sore. If this examination does not give a clear diagnosis in either way, give the benefit of the doubt to the patient, and not to the disease: excise the peccant tissues. In case of declared carcinoma, excise without a single day of unnecessary delay. The chief objects aimed at by the surgeon in operating are three: to prevent hemorrhage, to prevent the entrance of blood and septic matters from the mouth into the air-passages, and to extirpate the growth as completely as possible. Excision of the growth may best be undertaken in all but exceptional cases, after ligation of the lingual artery (on one or both sides) at its origin. This is accomplished by a section downward from the angle of the jaw through a point a little behind the tip of the greater cornu of the hyoid bone, which will enable the finger, after displacing the submaxillary salivary gland, to feel the pulsation of the external carotid artery, and the main vessel is exposed after ligation and division of any veins that may be in the way. The facial and lingual arteries springing from the front of the trunk, either separately or by a common stem, are to be seen, and we may tie one or both. All enlarged glands should be removed at the same time for histological examination. The tongue should be excised with scissors, leaving a wide margin of healthy tissue, especially in the direction of the floor of the mouth. The submaxillary triangle should be closely watched; and if recurrence in this situation becomes evident, or even before this evidence appears, should the examination of the glands originally excised prove that extension has taken place, the whole triangle should be cleared after ligation of the carotid artery.

CASTRATION FOR THE RELIEF OF HYPERTROPHY OF THE PROSTATE.

In a paper before the Medical Society of the State of California, BARD, of Ventura, after discussing briefly the theory upon which this operation is based, gives to Professor White the credit of first suggesting that as oöphorectomy usually results in decrease of uterine fibroids, so castration in man

would probably be followed by atrophy of an enlarged prostate gland. The arguments upon which this suggestion was based, and the experiments on dogs, which confirmed the theoretical conclusions reached by Dr. White, were published originally in the *Annals of Surgery* for August, 1893. These have been abstracted and quoted so frequently in the medical press, both at home and abroad, that the subject must now be familiar to all who keep in touch with current medical literature.

The author reported a case with marked hypertrophy of the prostate of several years' standing, accompanied by the usual train of symptoms. Double castration was followed by prompt amelioration of the distressing symptoms.

The statement that no physical effects occur after castration, after puberty and in middle life, is certainly borne out by the experience of a large number of careful operators.

A STUDY IN TECHNIQUE OF OPERATION UPON THE APPENDIX.

DAWBARN describes in the *International Journal of Surgery*, 1895, vol. viii. No. 8, the following method of dealing with the stump after removal of the appendix, which he has employed since 1890 in all suitable cases:

1. A continuous Lembert suture of silk is made to surround the appendix, running like a purse-string or gathering-string, in the superficial layers of the cæcum, one-fourth inch from the appendix. This suture is not yet tightened, although the first half of a surgeon's knot is already made.

2. The appendix is divided, leaving a stump of variable length, but never shorter than a half-inch.

3. This stump is stretched for a moment gently by introducing through its calibre a closed pair of slender, mouse-toothed forceps, passing them into the cæcum, and gently opening the blades; thereby any stricture from swelling of mucous membrane or from plastic deposit will be stretched, and the next step will be the easier in consequence.

4. The stump is seized at the extreme of its free end by a similar fine-pointed pair of mouse-toothed forceps, and the stump is promptly invaginated—turned "outside in"—as a glove finger might be. So that when completed the forceps and appendix-end are one-half inch *inside* the cæcum.

5. The suture is now tightened, during which step the forceps are withdrawn. Sometimes it is a help to insert a probe or grooved director between the open jaws of the forceps prior to withdrawing the latter, in order to prevent the appendix drawing itself out again with them.

Two points in the technique should be noted: the use of dry sterile gauze to hold the viscera, to prevent slipping, and pressure of the thumb and finger upon the cæcum near the appendicular attachment to prevent the escape of fecal contents during the manipulations.

ON THE TREATMENT OF SECONDARY HEMORRHAGE FROM THE ARTERIES OF THE UPPER EXTREMITY.

PLATT describes four cases of secondary hemorrhage of the upper extremity in the *Medical Chronicle*, vol. iii., No. 2, which he uses as a text for some remarks upon the treatment of this accident. Two of the cases presented clean wounds—one involving the ulnar artery and the other the superficial palmar

arch—both had been inflicted some days previously. It was quite easy to ligate both ends of the divided vessel by slightly enlarging the wound. Healing was rapid and satisfactory, and there was no further trouble.

The third and fourth cases are of special interest, as both wounds were sloughing. In one a suppurating adenitis, secondary to an infected wound of the thumb, eroded a small branch of the brachial artery near the main trunk, and in the other a punctured wound involving the radial artery had been packed so tightly that sloughing occurred. In the former, as it was impossible to ligate the injured vessel on account of the close proximity of the wound to the brachial artery, the latter was ligated with silk above and below the origin of the branch involved. The hemorrhage recurred, however, and depended upon the ligatures becoming septic and cutting through the vessel and coming away before the wound had healed. The author decided to trace the divided artery up and down until its walls were found healthy and to apply torsion. In the fourth case, after completely dividing the wounded artery, both ends were twisted. Both cases made an uninterrupted recovery. The author strongly advises the treatment applied in the last two patients in similar cases. He prefers torsion to ligature, which leaves a foreign body in the wound.

EXTRA-PERITONEAL CLOSURE OF ARTIFICIAL ANUS AND FECAL FISTULA.

J. GREIG SMITH describes in the *Bristol Medico-Chirurgical Journal*, vol. xiii., No. 47, the method which he has successfully employed in closing cases of artificial anus and fecal fistula. The object sought is to perform enterorraphy without opening the general peritoneal cavity. The author thinks too much has been made of the agglutination of peritoneal surfaces in abdominal surgery. It is by no means certain, he says, that two opposed surfaces of intact peritoneum unite so quickly as two surfaces denuded of peritoneum, and he insists that an opening in the gut can be closed as satisfactorily and as speedily by the apposition of rough cicatricial tissue on its surface as by the apposition of intact peritoneum.

Between the parietal peritoneum and any discharging intestinal opening is a circle of adhesions binding the bowel to the parietes. In the operation to be described these adhesions are left undisturbed. The bowel is delivered through an incision carried above and below the parietal opening, along with parietal peritoneum, which is separated from the parietes to any desired extent. The chief feature in the operation is this separation of parietal peritoneum, with its fat all around the fistula, for a distance of one or two inches, as is found necessary. The detachment should be begun at a distance from the fistula and carried down to it; it may be done almost entirely with the fingers.

In a case of fecal fistula the bowel does not protrude through the parietal opening, and there is no spur, or only a slight one. A simple fistula leads from the skin to the bowel. The first step in the operation is the scraping of the granulations lining the fistula, which is done with a sharp Volkmann's spoon. If there is any discharge from the intestine, a small sponge with a string attached is pushed through the fistula so as to block it. An incision is then made in the direction of the underlying muscular fibres, with the fistula in the centre; the incision does not pass through the fistula, but is